

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

- 1 ① (Currently Amended) A computer-implemented method for combining at
2 least two overlapping layers to render an image, the image containing a plurality of
3 image pixels, each overlapping layer containing a plurality of layer pixels, each layer
4 pixel corresponding to one of the image pixels, wherein each layer pixel has an opac-
5 ity value and wherein at least one of the overlapping layers has a fade value that
6 specifies an overall opacity of the at least one of the overlapping layers, the method
7 comprising:
8 a') defining a tile, the tile comprising a subset of the image pixels
9 delimited according to an area of overlap among a set of at least
10 two layers, so that a first portion of the image lies within the tile
11 and a second portion of the image lies outside the tile; and
12 a) processing the first portion of the image distinctly from the sec-
13 ond portion of the image by, for at least one image pixel in the
14 defined tile:
15 a.1) initializing an accumulator color value and an accumula-
16 tor opacity value;

- 17 a.2) selecting one of the layers in the set of at least two layers,
18 the selected layer having a layer pixel corresponding to
19 the image pixel, the layer pixel having a color value;
- 20 a.3) compositing the color value of the layer pixel with the ac-
21 cumulator color value, and compositing at least one of the
22 opacity value of the layer pixel and the fade value of the
23 selected layer with the accumulator opacity value;
- 24 a.4) storing ~~the result of a.3)~~ in the accumulator color value
25 and the accumulator opacity value resulting from a.3);
- 26 a.5) determining whether layer pixels for any remaining lay-
27 ers in the set of at least two layers should be processed;
- 28 a.6) responsive to a.5) indicating that layer pixels for any re-
29 maining layers should be processed, repeating a.2) to a.6);
- 30 and
- 31 a.7) outputting the accumulator color value;

32 wherein, for each defined tile, the set of layers that overlap within the
33 tile is homogenous throughout the entirety of the tile.

1 2. (Currently Amended) The method of claim 1, wherein ~~each layer pixel has~~
2 ~~an opacity value, and wherein:~~

- 3 ~~a.1) further comprises initializing an accumulator opacity value;~~
- 4 ~~a.3) further comprises compositing the opacity value of the layer pixel~~
5 ~~with the accumulator opacity value; and~~

6 a.5) comprises determining whether the accumulator opacity value indicates full
7 opacity.

1 3. (Original) The method of claim 1, wherein a.2) comprises selecting a top-
2 most remaining layer in the set of at least two layers.

1 4. (Currently Amended) The method of claim 1, wherein a.7) comprises
2 outputting the accumulator color value to a frame buffer.

1 5. (Original) The method of claim 1, further comprising:
2 b) displaying the image.

1 6. (Original) The method of claim 1, further comprising:
2 b) repeating a) for each image pixel in the defined tile.

1 7. (Original) The method of claim 1, wherein a) comprises performing a.1)
2 through a.7) for at least two image pixels concurrently.

1 8. (Currently Amended) The method of claim 1, further comprising:
2 b) concurrently with a), for a second image pixel in the defined tile:
3 b.1) initializing a second accumulator color value;
4 b.2) selecting one of the layers in the set of at least two layers, the se-
5 lected layer having a second layer pixel corresponding to the
6 second image pixel, the second layer pixel having a color value;

- 7 b.3) compositing the color value of the second layer pixel with the
8 second accumulator color value;
- 9 b.4) storing ~~the result of b.3)~~ in the second accumulator color value
10 resulting from b.3);
- 11 b.5) determining whether layer pixels for any remaining layers in the
12 set of at least two layers should be processed;
- 13 b.6) responsive to b.5) indicating that layer pixels for any remaining
14 layers should be processed, repeating b.2) to b.6); and
- 15 b.7) outputting the second accumulator color value.

1 9. (Original) The method of claim 1, wherein at least one of the layers in the
2 set of at least two layers is non-rectangular.

1 10. (Currently amended) The method of claim 1, wherein at least one pixel of
2 at least one of the layers in the set of at least two layers is transparent, and wherein
3 compositing the color value of the layer pixel with the accumulator color value in a.3)
4 comprises:

- 5 a.3.1) responsive to the layer pixel being transparent, retaining the ac-
6 cumulator color value; and
- 7 a.3.2) responsive to the layer pixel not being transparent, compositing
8 the color value of the layer pixel with the accumulator color
9 value.

1 11. (Original) The method of claim 1, further comprising:

2 b') repeating a') and a) for at least one second defined tile.

1 12. (Original) The method of claim 1, wherein each layer comprises a win-
2 dow, and wherein the image comprises a display for a windowing system.

1 13. (Original) The method of claim 1, wherein a first one of the layers in the
2 set overlaps a second one of the layers in the set, and wherein each layer comprises
3 bounds defined by edges, and wherein at least one edge of the first layer lies within
4 the bounds of the second layer, and wherein a') comprises:

5 subdividing the second layer along a line corresponding to an exten-
6 sion of the at least one edge of the first layer that lies within the
7 bounds of the second layer.

1 14. (Currently Amended) The method of claim 1, wherein[[:]]

2 ~~a.2) comprises selecting one of the layers in the set of at least two layers,~~
3 ~~the selected layer having a layer pixel corresponding to the im-~~
4 ~~age pixel, the layer pixel having a color value and an alpha~~
5 ~~value; and~~

6 a.3) comprises compositing the color value of the layer pixel with the accumulator
7 color value, using the alpha value using at least one of the opacity value of the layer
8 pixel, the fade value of the selected layer and the accumulator opacity value.

1 15. (Currently Amended) A system for combining at least two overlapping
2 layers to render an image, the image containing a plurality of image pixels, each

3 overlapping layer containing a plurality of layer pixels, each layer pixel correspond-
4 ing to one of the image pixels, wherein each layer pixel has an opacity value and
5 wherein at least one of the overlapping layers has a fade value that specifies an over-
6 all opacity of the at least one of the overlapping layers, the system comprising:

7 a tile subdivider, for defining a tile, the tile comprising a subset of the
8 image pixels delimited according to an area of overlap among a
9 set of at least two layers, so that a first portion of the image lies
10 within the tile and a second portion of the image lies outside the
11 tile;

12 ~~an accumulator~~ one or more accumulators, for initializing an accumula-
13 tor color value and an accumulator opacity value for at least one
14 image pixel in the defined tile;

15 a layer selector, coupled to the tile subdivider, for successively selecting
16 each of at least a subset of the layers in the set of at least two lay-
17 ers, each selected layer having a layer pixel corresponding to the
18 image pixel, the layer pixel having a color value;

19 a compositor coupled to the layer selector and to the one or more ae-
20 ~~cumulator~~ accumulators, for, for each successively selected layer,
21 compositing the color value of the layer pixel with the accumula-
22 tor color value, and compositing at least one of the opacity value
23 of the layer pixel and the fade value of the selected layer with the
24 accumulator opacity value, and storing the ~~result~~ results in the
25 ~~accumulator~~ one or more accumulators; and

26 an output device, coupled to the one or more accumulator accumula-
27 tors, for outputting the accumulator color value;
28 wherein in combining the overlapping layers, the one or more accumu-
29 lator accumulators, the layer selector, and the compositor proc-
30 ess the first portion of the image distinctly from the second por-
31 tion of the image;
32 wherein, for each defined tile, the set of layers that overlap within the
33 tile is homogenous throughout the entirety of the tile.

1 16. (Currently Amended) The system of claim 15, wherein ~~each layer pixel~~
2 ~~has an opacity value, and wherein:~~
3 ~~the accumulator further initializes an accumulator opacity value;~~
4 ~~the compositor further composites the opacity value of the layer pixel~~
5 ~~with the accumulator opacity value and stores the result in the~~
6 ~~accumulator; and~~
7 the subset of overlapping layers selected by the layer selector is determined respon-
8 sive to a comparison of the accumulator opacity value with a full opacity value.

1 17. (Original) The system of claim 15, wherein the layer selector successively
2 selects layers by selecting a topmost remaining layer in the set of at least two layers.

1 18. (Currently Amended) The system of claim 15, wherein the output device
2 outputs the accumulator color value to a frame buffer.

1 19. (Original) The system of claim 15, further comprising a display device,
2 coupled to the output device, for displaying the image.

1 20. (Currently Amended) The system of claim 15, wherein each of the layer
2 selector, compositor, ~~accumulator~~ one or more accumulators, and output device op-
3 erates on each image pixel in the defined tile.

1 21. (Currently Amended) The system of claim 15, wherein the layer selector,
2 compositor, ~~accumulator~~ one or more accumulators, and output device each operate
3 on at least two image pixels concurrently.

1 22. (Currently Amended) The system of claim 15, ~~further comprising a sec-~~
2 ~~ond accumulator, coupled to the compositor, wherein:~~

3 ~~the second accumulator initializes~~ one of the one or more accumulators
4 initializes a second accumulator color value for a second image
5 pixel in the defined tile;

6 the layer selector, concurrently with successively selecting each of at
7 least a subset of the layers in the set of at least two layers having
8 a layer pixel corresponding to the first image pixel, selects one of
9 the layers in the set of at least two layers having a second layer
10 pixel corresponding to the second image pixel, the second layer
11 pixel having a color value;

12 the compositor, concurrently with compositing the first color value of
13 the layer pixel with the accumulator color value, composites the
14 color value of the second layer pixel with the second ac-
15 cumulator color value and stores the result in the ~~second ac-~~
16 ~~cumulator~~ one of the one or more accumulators; and
17 the output device outputs the second accumulator color value.

1 23. (Original) The system of claim 15, wherein at least one of the layers in the
2 set of at least two layers is non-rectangular.

1 24. (Original) The system of claim 15, wherein at least one pixel of at least one
2 of the layers in the set of at least two layers is transparent, and wherein the composi-
3 tor:
4 responsive to the layer pixel being transparent, retains the accumulator
5 color value; and
6 responsive to the layer pixel not being transparent, composites the color
7 value of the layer pixel with the accumulator color value.

1 25. (Currently Amended) The system of claim 15, wherein:
2 the tile subdivider defines as a second tile a second area of overlap be-
3 tween a second set of at least two layers, the tile comprising a
4 second subset of the image pixels;

5 ~~the accumulator~~ one of the one or more accumulators initializes a sec-
6 ond accumulator color value for at least one image pixel in the
7 second defined tile;
8 the layer selector successively selects each of at least a subset of the lay-
9 ers in the second set of at least two layers, each selected layer
10 having a layer pixel corresponding to the image pixel, the layer
11 pixel having a color value;
12 the compositor, for each successively selected layer, composites the
13 color value of the layer pixel with the second accumulator color
14 value and stores the result in ~~the accumulator~~ one of the one or
15 more accumulators; and
16 the output device outputs the second accumulator color value.

1 26. (Original) The system of claim 15, wherein each layer comprises a win-
2 dow, and wherein the image comprises a display for a windowing system.

1 27. (Original) The system of claim 15, wherein a first one of the layers in the
2 set overlaps a second one of the layers in the set, and wherein each layer comprises
3 bounds defined by edges, and wherein at least one edge of the first layer lies within
4 the bounds of the second layer, and wherein the tile subdivider subdivides the sec-
5 ond layer along a line corresponding to an extension of the at least one edge of the
6 first layer that lies within the bounds of the second layer.

1 28. (Currently Amended) The system of claim 15, wherein [[:]]

2 ~~the layer selector successively selects each of at least a subset of the lay-~~
3 ~~ers in the set of at least two layers, each selected layer having a~~
4 ~~layer pixel corresponding to the image pixel, the layer pixel hav-~~
5 ~~ing a color value and an alpha value; and~~
6 the compositor composites the color value of the layer pixel with the accumulator
7 color value, ~~using the alpha value~~ using at least one of the opacity value of the layer
8 pixel, the fade value of the selected layer and the accumulator opacity value.

1 (29.) (Currently Amended) A computer program product comprising a com-
2 puter-usable medium having computer-readable code embodied therein for combin-
3 ing at least two overlapping layers to render an image, the image containing a plu-
4 rality of image pixels, each overlapping layer containing a plurality of layer pixels,
5 each layer pixel corresponding to one of the image pixels, wherein each layer pixel
6 has an opacity value and wherein at least one of the overlapping layers has a fade
7 value that specifies an overall opacity of the at least one of the overlapping layers, the
8 computer program product comprising:

9 computer-readable program code devices configured to cause a com-
10 puter to define a tile, the tile comprising a subset of the image
11 pixels delimited according to an area of overlap among a set of
12 at least two layers, so that a first portion of the image lies within
13 the tile and a second portion of the image lies outside the tile;
14 and

15 computer-readable program code devices configured to cause a com-
16 puter to process the first portion of the image distinctly from the
17 second portion of the image by, for at least one image pixel in
18 the defined tile:
19 initializing an accumulator color value and an accumulator
20 opacity value;
21 selecting one of the layers in the set of at least two layers, the se-
22 lected layer having a layer pixel corresponding to the im-
23 age pixel, the layer pixel having a color value;
24 compositing the color value of the layer pixel with the accu-
25 mulator color value, and compositing at least one of the
26 opacity value of the layer pixel and the fade value of the
27 selected layer with the accumulator opacity value;
28 storing ~~the result of the compositing in~~ the accumulator color
29 value and the accumulator opacity value resulting from
30 the compositing;
31 determining whether layer pixels for any remaining layers in the
32 set of at least two layers should be processed;
33 responsive to the determination indicating that layer pixels for
34 any remaining layers should be processed, repeating the
35 initializing, selecting, compositing, storing, and determin-
36 ing steps; and
37 outputting the accumulator color value;

38 wherein, for each defined tile, the set of layers that overlap within the
39 tile is homogenous throughout the entirety of the tile.

1 30. (Currently Amended) The computer program product of claim 29,
2 wherein each layer pixel has an opacity value, and wherein:
3 ~~the computer-readable program code devices configured to cause a~~
4 ~~computer to initialize further comprise computer-readable pro-~~
5 ~~gram code devices configured to cause a computer to initialize~~
6 ~~an accumulator opacity value;~~
7 ~~the computer-readable program code devices configured to cause a~~
8 ~~computer to composite further comprise computer-readable~~
9 ~~program code devices configured to cause a computer to com-~~
10 ~~posite the opacity value of the layer pixel with the accumulator~~
11 ~~opacity value; and~~
12 the computer-readable program code devices configured to cause a computer to de-
13 termine whether layer pixels for any remaining layers should be processed comprise
14 computer-readable program code devices configured to cause a computer to deter-
15 mine whether the accumulator opacity value indicates full opacity.

1 31. (Original) The computer program product of claim 29, wherein the com-
2 puter-readable program code devices configured to cause a computer to select one of
3 the layers comprise computer-readable program code devices configured to cause a
4 computer to select a topmost remaining layer in the set of at least two layers.

1 32. (Currently Amended) The computer program product of claim 29,
2 wherein the computer-readable program code devices configured to cause a com-
3 puter to output the accumulator color value comprise computer-readable program
4 code devices configured to cause a computer to output the accumulator color value
5 to a frame buffer.

1 33. (Original) The computer program product of claim 29, further compris-
2 ing:
3 computer-readable program code devices configured to cause a com-
4 puter to display the image.

1 34. (Original) The computer program product of claim 29, further compris-
2 ing:
3 computer-readable program code devices configured to cause a com-
4 puter to repeat the initializing, selecting, compositing, storing,
5 determining, and outputting for each image pixel in the defined
6 tile.

1 35. (Original) The computer program product of claim 29, wherein the com-
2 puter-readable program code devices are configured to cause a computer to perform
3 the initializing, selecting, compositing, storing, and outputting for at least two image
4 pixels concurrently.

1 ~~36~~ (Currently Amended) The computer program product of claim 29, further
2 comprising

3 computer-readable program code devices configured to cause a com-
4 puter to, for a second image pixel in the defined tile and concu-
5 rently with the selecting, compositing, storing, and outputting
6 for the first image pixel:

7 initialize a second accumulator color value;

8 select one of the layers in the set of at least two layers, the se-

9 lected layer having a second layer pixel corresponding to

10 the second image pixel, the second layer pixel having a

11 color value;

12 composite the color value of the second layer pixel with the sec-

13 ond accumulator color value;

14 store ~~the result of the compositing in~~ the second accumulator

15 color value resulting from the compositing;

16 determine whether layer pixels for any remaining layers in the

17 set of at least two layers should be processed;

18 responsive to the determination indicating that layer pixels for

19 any remaining layers should be processed, repeat the ini-

20 tializing, selecting, compositing, storing, and determining

21 steps; and

22 output the second accumulator color value.

1 37. (Original) The computer program product of claim 29, wherein at least
2 one of the layers in the set of at least two layers is non-rectangular.

1 38. (Original) The computer program product of claim 29, wherein at least
2 one pixel of at least one of the layers in the set of at least two layers is transparent,
3 and wherein the computer-readable program code devices configured to cause a
4 computer to composite the color value of the layer pixel with the accumulator color
5 value comprise computer-readable program code devices configured to cause a com-
6 puter to:

7 responsive to the layer pixel being transparent, retain the accumulator
8 color value; and

9 responsive to the layer pixel not being transparent, composite the color
10 value of the layer pixel with the accumulator color value.

1 39. (Original) The computer program product of claim 29, further com-
2 prising:

3 computer-readable program code devices configured to cause a com-
4 puter to define as a second tile an area of overlap between a set
5 of at least two layers, the second tile comprising a second subset
6 of the image pixels; and

7 computer-readable program code devices configured to cause a com-
8 puter to repeat the initializing an accumulator color value, select-

9 ing one of the layers, compositing, storing, repeating, and out-
10 putting, for the second defined tile.

1 40. (Original) The computer program product of claim 29, wherein each layer
2 comprises a window, and wherein the image comprises a display for a windowing
3 system.

1 41. (Original) The computer program product of claim 29, wherein a first one
2 of the layers in the set overlaps a second one of the layers in the set, and wherein
3 each layer comprises bounds defined by edges, and wherein at least one edge of the
4 first layer lies within the bounds of the second layer, and wherein the computer-
5 readable program code devices configured to cause a computer to define as a tile an
6 area of overlap comprises:

7 computer-readable program code devices configured to cause a com-
8 puter to subdivide the second layer along a line corresponding
9 to an extension of the at least one edge of the first layer that lies
10 within the bounds of the second layer.

1 42. (Currently Amended) The computer program product of claim 29,
2 wherein:

3 the computer-readable program code devices configured to cause a
4 computer to select one of the layers comprise computer-readable
5 program code devices configured to cause a computer to select
6 one of the layers in the set of at least two layers, the selected

7 layer having a layer pixel corresponding to the image pixel, the
8 layer pixel having a color value and an alpha value; and
9 the computer-readable program code devices configured to cause a
10 computer to composite the color value of the layer pixel with the
11 accumulator color value are configured to cause a computer to
12 use ~~the alpha value~~ at least one of the opacity value of the layer
13 pixel, the fade value of the selected layer and the accumulator
14 opacity value to composite the color value.

1 43. (Currently Amended) A system for combining at least two overlapping
2 layers to render an image, the image containing a plurality of image pixels, each
3 overlapping layer containing a plurality of layer pixels, each layer pixel correspond-
4 ing to one of the image pixels, wherein each layer pixel has an opacity value and
5 wherein at least one of the overlapping layers has a fade value that specifies an over-
6 all opacity of the at least one of the overlapping layers, the system comprising:

7 tile subdividing means, for defining a tile, the tile comprising a subset
8 of the image pixels delimited according to an area of overlap
9 among a set of at least two layers, so that a first portion of the
10 image lies within the tile and a second portion of the image lies
11 outside the tile;

12 accumulating means for initializing an accumulator color value and an
13 accumulator opacity value for at least one image pixel in the de-
14 fined tile;

15 layer selecting means, for successively selecting each of at least a subset
16 of the layers in the set of at least two layers, each selected layer
17 having a layer pixel corresponding to the image pixel, the layer
18 pixel having a color value;
19 compositing means, coupled to the layer selecting means and to the ac-
20 cumulating means, for, for each successively selected layer,
21 compositing the color value of the layer pixel with the ac-
22 cumulator color value, and compositing at least one of the opac-
23 ity value of the layer pixel and the fade value of the selected
24 layer with the accumulator opacity value, and storing the ~~result~~
25 results in the accumulating means; and
26 output means, coupled to the accumulating means, for outputting the
27 accumulator color value;
28 wherein in combining the overlapping layers, the accumulating means,
29 the layer selecting means, and the compositing means process
30 the first portion of the image distinctly from the second portion
31 of the image;
32 wherein, for each defined tile, the set of layers that overlap within the
33 tile is homogenous throughout the entirety of the tile.

1 44. (Currently Amended) The system of claim 43, wherein ~~each layer pixel~~
2 ~~has an opacity value, and wherein:~~

3 ~~the accumulating means further initializes an accumulator opacity~~
4 ~~value;~~
5 ~~the compositing means further composites the opacity value of the~~
6 ~~layer pixel with the accumulator opacity value and stores the re-~~
7 ~~sult in the accumulating means; and~~
8 the subset of overlapping layers selected by the layer selecting means is determined
9 responsive to a comparison of the accumulator opacity value with a full opacity
10 value.

1 45. (Original) The system of claim 43, wherein the layer selecting means suc-
2 cessively selects layers by selecting a topmost remaining layer in the set of at least
3 two layers.

1 46. (Currently Amended) The system of claim 43, wherein the output means
2 outputs the accumulator color value to a frame buffer.

1 47. (Original) The system of claim 43, further comprising display means, cou-
2 pled to the output means, for displaying the image.

1 48. (Original) The system of claim 43, wherein each of the layer selecting
2 means, compositing means, accumulating means, and output means operates on
3 each image pixel in the defined tile.

1 49. (Original) The system of claim 43, wherein each of the layer selecting
2 means, compositing means, accumulating means, and output means operates on at
3 least two image pixels concurrently.

1 50. (Currently Amended) The system of claim 43, ~~further comprising a sec-~~
2 ~~ond accumulating means, coupled to the compositing means, for initializing wherein~~
3 the accumulating means initializes a second accumulator color value for a second
4 image pixel in the defined tile, and wherein:

5 the layer selecting means, concurrently with successively selecting each
6 of at least a subset of the layers in the set of at least two layers
7 having a layer pixel corresponding to the first image pixel, se-
8 lects one of the layers in the set of at least two layers having a
9 second layer pixel corresponding to the second image pixel, the
10 second layer pixel having a color value;

11 the compositing means, concurrently with compositing the first color
12 value of the layer pixel with the accumulator color value, com-
13 posites the color value of the second layer pixel with the second
14 accumulator color value and stores the result in the ~~second ac-~~
15 cumulating means; and

16 the output means outputs the second accumulator color value.

1 51. (Original) The system of claim 43, wherein at least one of the layers in the
2 set of at least two layers is non-rectangular.

1 52. (Original) The system of claim 43, wherein at least one pixel of at least one
2 of the layers in the set of at least two layers is transparent, and wherein the composi-
3 ting means:

4 responsive to the layer pixel being transparent, retains the accumulator
5 color value; and

6 responsive to the layer pixel not being transparent, composites the color
7 value of the layer pixel with the accumulator color value.

1 53. (Currently Amended) The system of claim 43, wherein:

2 the tile subdividing means defines as a second tile a second area of
3 overlap between a second set of at least two layers, the tile com-
4 prising a second subset of the image pixels;

5 the accumulating means initializes a second accumulator color value
6 for at least one image pixel in the second defined tile;

7 the layer selecting means successively selects each of at least a subset of
8 the layers in the second set of at least two layers, each selected
9 layer having a layer pixel corresponding to the image pixel, the
10 layer pixel having a color value;

11 the compositing means, for each successively selected layer, composites
12 the color value of the layer pixel with the second accumulator
13 color value and stores the result in the ~~accumulator~~ accumulat-
14 ing means; and

15 the output means outputs the second accumulator color value.

1 54. (Original) The system of claim 43, wherein each layer comprises a win-
2 dow, and wherein the image comprises a display for a windowing system.

1 55. (Original) The system of claim 43, wherein a first one of the layers in the
2 set overlaps a second one of the layers in the set, and wherein each layer comprises
3 bounds defined by edges, and wherein at least one edge of the first layer lies within
4 the bounds of the second layer, and wherein the tile subdividing means comprises:
5 means for subdividing the second layer along a line corresponding to
6 an extension of the at least one edge of the first layer that lies
7 within the bounds of the second layer.

1 56. (Currently Amended) The system of claim 43, wherein [[:]]
2 ~~the layer selecting means successively selects each of at least a subset of~~
3 ~~the layers in the set of at least two layers, each selected layer~~
4 ~~having a layer pixel corresponding to the image pixel, the layer~~
5 ~~pixel having a color value and an alpha value; and~~
6 the compositing means composites the color value of the layer pixel with the accu-
7 mulator color value ~~, using the alpha value~~ using at least one of the opacity value of
8 the layer pixel, the fade value of the selected layer and the accumulator opacity
9 value.

1 57. (Currently Amended) In an image containing a plurality of layers,
2 wherein a first one of the layers overlaps a second one of the layers, and wherein

3 each layer comprises bounds defined by edges, and wherein at least one edge of the
4 first layer lies within the bounds of the second layer, a method of subdividing tiles,
5 comprising:
6 subdividing the second layer along a straight line corresponding to an
7 extension of the at least one edge of the first layer that lies within
8 the bounds of the second layer, to obtain two tile subdivisions;
9 and
10 storing, in a tile list, a representation of at least a subset of the obtained
11 tile subdivisions;
12 wherein, for each tile, the set of layers that overlap within the tile is
13 homogenous throughout the entirety of the tile and wherein at
14 least one of the plurality of layers has a fade value that specifies
15 an overall opacity of the at least one of the plurality of layers.

1 58. (Original) The method of claim 57, further comprising:
2 repeating the subdividing step using at least one of the obtained tile
3 subdivisions.

1 59. (Original) The method of claim 57, further comprising:
2 joining at least two adjacent tile subdivisions in the tile list.

1 60. (Original) The method of claim 57, further comprising:

responsive to at least two adjacent tile subdivisions including portions
of the same set of identical layers as one another, joining the at
least two adjacent tile subdivisions in the tile list.

61. (Currently Amended) In a device containing an image having a plurality
of layers, wherein a first one of the layers overlaps a second one of the layers, and
wherein each layer comprises bounds defined by edges, and wherein at least one
edge of the first layer lies within the bounds of the second layer, a system for subdividing tiles, comprising:

a tile subdivider, for subdividing the second layer along a straight line
corresponding to an extension of the at least one edge of the first
layer that lies within the bounds of the second layer, to obtain
two tile subdivisions; and

a tile list, coupled to the tile subdivider, for storing a representation of
at least a subset of the obtained tile subdivisions;

wherein, for each tile, the set of layers that overlap within the tile is

homogenous throughout the entirety of the tile and wherein at

least one of the plurality of layers has a fade value that specifies

an overall opacity of the at least one of the plurality of layers.

62. (Original) The system of claim 61, wherein:

the tile subdivider repeats the subdividing using at least one of the obtained tile subdivisions.

1 63. (Original) The system of claim 61, further comprising:
2 a tile joiner, coupled to the tile list, for joining at least two adjacent tile
3 subdivisions in the tile list.

1 64. (Original) The system of claim 61, further comprising:
2 a tile joiner, coupled to the tile list, for, responsive to at least two adja-
3 cent tile subdivisions including portions of the same set of iden-
4 tical layers as one another, joining the at least two adjacent tile
5 subdivisions in the tile list.

1 65. (Currently Amended) A computer program product comprising a com-
2 puter-usable medium having computer-readable code embodied therein for subdi-
3 viding tiles in an image containing a plurality of layers, wherein a first one of the
4 layers overlaps a second one of the layers, and wherein each layer comprises bounds
5 defined by edges, and wherein at least one edge of the first layer lies within the
6 bounds of the second layer, comprising:
7 computer-readable program code devices configured to cause a com-
8 puter to subdivide the second layer along a straight line corre-
9 sponding to an extension of the at least one edge of the first layer
10 that lies within the bounds of the second layer, to obtain two tile
11 subdivisions; and

12 computer-readable program code devices configured to cause a com-
13 puter to store, in a tile list, a representation of at least a subset of
14 the obtained tile subdivisions;
15 wherein, for each tile, the set of layers that overlap within the tile is
16 homogenous throughout the entirety of the tile and wherein at
17 least one of the plurality of layers has a fade value that specifies
18 an overall opacity of the at least one of the plurality of layers.

1 66. (Original) The computer program product of claim 65, further compris-
2 ing:

3 computer-readable program code devices configured to cause a com-
4 puter to repeat the subdividing using at least one of the obtained
5 tile subdivisions.

1 67. (Original) The computer program product of claim 65, further compris-
2 ing:

3 computer-readable program code devices configured to cause a com-
4 puter to join at least two adjacent tile subdivisions in the tile list.

1 68. (Original) The computer program product of claim 65, further compris-
2 ing:

3 computer-readable program code devices configured to cause a com-
4 puter to, responsive to at least two adjacent tile subdivisions in-
5 cluding portions of the same set of identical layers as one an-

6 other, join the at least two adjacent tile subdivisions in the tile
7 list.

1 69. (Currently Amended) In a device containing an image having a plurality
2 of layers, wherein a first one of the layers overlaps a second one of the layers, and
3 wherein each layer comprises bounds defined by edges, and wherein at least one
4 edge of the first layer lies within the bounds of the second layer, a system for subdividing tiles, comprising:
5

6 tile subdividing means, for subdividing the second layer along a
7 straight line corresponding to an extension of the at least one
8 edge of the first layer that lies within the bounds of the second
9 layer, to obtain two tile subdivisions; and

10 tile list storage means, coupled to the tile subdividing means, for storing
11 a representation of at least a subset of the obtained tile subdivisions;
12

13 wherein, for each tile, the set of layers that overlap within the tile is
14 homogenous throughout the entirety of the tile and wherein at
15 least one of the plurality of layers has a fade value that specifies
16 an overall opacity of the at least one of the plurality of layers.

1 70. (Original) The system of claim 69, wherein:

2 the tile subdividing means repeats the subdividing using at least one of
3 the obtained tile subdivisions.

1 71. (Original) The system of claim 69, further comprising:
2 tile joining means, coupled to the tile list storage means, for joining at
3 least two adjacent tile subdivisions in the tile list.

1 72. (Original) The system of claim 69, further comprising:
2 tile joining means, coupled to the tile list storage means, for, responsive
3 to at least two adjacent tile subdivisions including portions of
4 the same set of identical layers as one another, joining the at least
5 two adjacent tile subdivisions in the tile list.